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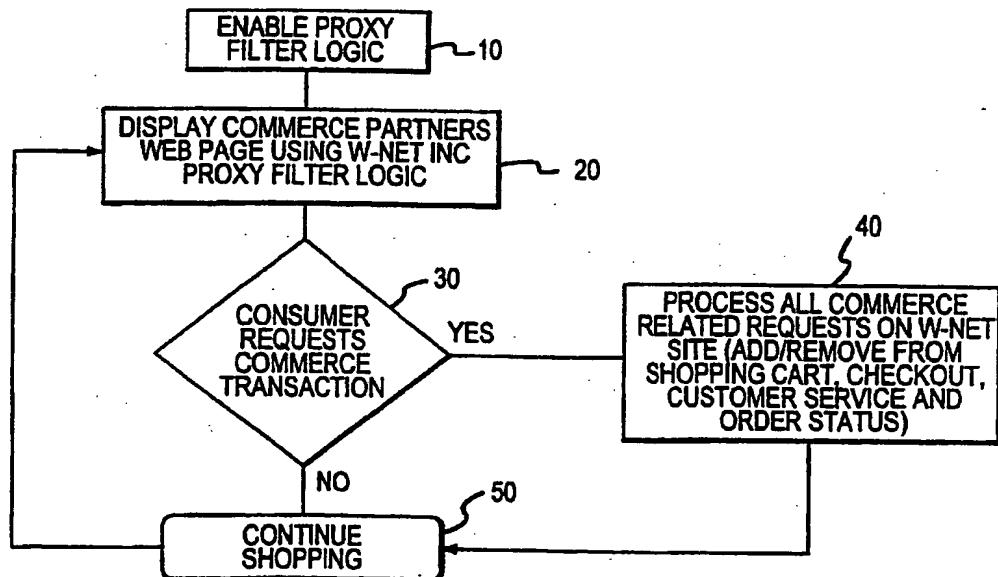
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(54) Title: INTERNET VENDING SYSTEM



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(57) Abstract: A system of computer network vending between a consumer and vendor website uses a primary website as an intermediary between the consumer and the vendor website. The primary website maps the vendor website into commerce processes (40) and non-commerce processes. The primary website acts upon consumer requests (30) related to the commerce processes (40), and passes the non-commerce requests to the vendor website for appropriate action. The consumer is within the primary website during the entire transaction. While the invention is intended for use with the Internet, it may also have application with other computer networks.

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## 6 FIELD OF THE INVENTION

7 The present invention relates to the field of retailing products over the Internet or  
8 another computer network. The invention allows a single entity to dynamically offer  
9 products from one or more different vendors, and for that single entity to maintain  
10 control over the entire vending experience.

## 11 BACKGROUND

12 Since the popular development of the Internet and in particular the World Wide  
13 Web (WWW) began, Internet commerce has increased exponentially. Currently, many  
14 individuals complete purchases of a wide range of consumer goods and services over  
15 the Internet. More than half of North American households are expected have Internet  
16 access in the near future, and many consumers are comfortable shopping on-line. The  
17 Internet is gaining increased acceptance throughout the world, and the number of users  
18 and value of products sold over the Internet is constantly increasing.

19 Internet vending is currently practiced by numerous vendors, and much effort has  
20 been expended to design and implement Internet vending systems. See for example  
21 *Building CyberStores* by Martin Nemzow (McGraw-Hill; 1997); *How the Internet Works*,  
22 *Millennium Edition* by P. Grallen (Que Corp; 1999) (both incorporated by reference).  
23 However, the current Internet vending model is not ideal. In the prior art Internet  
24 system, a consumer purchases items from a multitude of separate vendors. As shown  
25 in FIG. 1, a consumer C who wishes to transact with a number of different Internet

1    vendors (designated V1, V2 to Vn) must establish a separate transaction with each  
2    vendor. For example, the consumer C may wish to buy a book from a book seller  
3    vendor V1 which will be delivered by conventional means, to use banking services from  
4    vendor V2, to download software from vendor Vn, and so on. While this system is  
5    operative and is currently employed with some success, it has drawbacks. The  
6    customer must establish a separate relationship with each of the vendors. This is  
7    inconvenient, as it requires multiple, repetitive input of ordering information. It also  
8    forces the consumer to become familiar with a number of user interfaces, which can be  
9    confusing. It also raises security issues, because the consumer must repeatedly  
10   transmit sensitive information over the Internet and also must be satisfied that each  
11   vendor is trustworthy.

12       An Internet structure that is in some ways related to certain embodiments of the  
13   present invention is what is sometimes referred to as an "Internet mall." This does not  
14   have a precise definition, but generally refers to some form of cooperative advertising or  
15   pooling of resources of a number of different vendors. However, a customer would still  
16   have to transact separately with a number of different vendors. Alternatively, an  
17   Internet mall could describe one vendor which offers for sale the products of a number  
18   of different manufacturers or service providers. However, this does not truly allow a  
19   consumer to deal with more than one vendor having an Internet presence; instead it  
20   only allows the consumer to deal with a single vendor who offers products having  
21   multiple origins. Heretofore, there has been no solution which allows a consumer to  
22   purchase from a number of different vendors who have on-line sites, but wherein the  
23   consumer has only to transact with a single entity.

1           Further, Internet commerce between even a single vendor and a consumer in its  
2    current form is not always ideal from either the viewpoint of the vendor or the consumer.  
3    There are cases when a third party could add value to a transaction between the vendor  
4    and the consumer by acting as an intermediary. For instance, the third party may have  
5    access to locating consumers, and a certain class of consumers may be more inclined  
6    to transact directly with the third party than with the vendor, either because of a pre-  
7    existing relationship, security concerns, or for other reasons. The vendor may desire to  
8    have the third party directly interact with the consumer, so as to reduce the tasks that  
9    the vendor must perform in order to complete the transaction.

10           An improved system of commerce between consumers and one or more vendors  
11    that allows a third party to complete the transaction can be expected to gain favorable  
12    commercial acceptance and represents a significant advance in the art.

13           **SUMMARY**

14           The present invention includes a system for computer network vending between  
15    a consumer who has a client computer and a vendor who has a website using an  
16    intermediary, which is termed the primary website. The primary website is in electronic  
17    communication with the client and the vendor website. The primary website delivers the  
18    content of the vendor website to the consumer and may also add its own content on the  
19    fly to the vendor website content. The consumer may take action based upon received  
20    content, and make either a commerce request (such as to purchase an item or inquire  
21    into the status of order) or a non-commerce request. The primary website handles all  
22    commerce requests, and the primary website passes all non-commerce requests to the

1 vendor website. Thus, the consumer may in effect interact with the vendor website  
2 even though the client is always within the primary website.  
3 Based upon the foregoing, it can be appreciated that the primary website controls  
4 all aspects of the consumer's shopping experience, and controls all items related to the  
5 consumer's "shopping basket." The content related to the products offered for sale is  
6 controlled by the vendor website(s).

7 **BRIEF DESCRIPTION OF THE DRAWINGS**

8 All figures herein are illustrative only of certain embodiments of the invention and  
9 should not be construed to limit the invention as claimed, it being understood that  
10 various modifications will be obvious to those skilled in the art which may still fall within  
11 the scope of the invention.

12 FIG. 1 is a schematic representation of a prior art Internet vending model.

13 FIG. 2 is a flow chart of an Internet vending system according to an aspect of the  
14 present invention.

15 **DETAILED DESCRIPTION**

16 The present invention has particular utility with the Internet and the World Wide  
17 Web, although it may be used with other computer networks. For convenience of  
18 discussion, the following description assumes utility with the Internet, and employs that  
19 terminology.

20 The present invention allows one entity (which will be termed the "primary entity"  
21 herein) to offer the products of one or more other entities (referred to as "vendors"  
22 herein) through the first entity's website (which will be termed the "primary website"  
23 herein). The consumer of the products need only access the primary website to

1 purchase a multitude of goods and services originating from one or more vendors. The  
2 consumer can browse and complete transactions (i.e., shop) the "native" site of each of  
3 the vendors (hereinafter termed the "vendor website"). By this, it is meant that the  
4 vendor has a website which could be accessed directly, instead of through the primary  
5 website. While the present invention is not limited by specific embodiments of the  
6 vendor website, such a site typically has information available relating to goods or  
7 services (generally termed "products") for sale (which includes leasing or any other form  
8 of commercial transaction), and enables a user to find more information about the  
9 products such as by reading a review of a book, or downloading a portion of music in  
10 order to evaluate a potential purchase of a musical selection. Further, the site has  
11 means allowing the purchase of the products, generally offered through a user interface  
12 known as a shopping basket (also known as a shopping cart). Well known examples of  
13 such sites are found at the Internet domain names "amazon.com", "buy.com", and  
14 "800.com."

15 The present invention is advantageous for many reasons, as further elaborated.  
16 In a particular embodiment, the consumer need only deal with one entity to purchase  
17 many different products, which is more convenient and safer for the customer. For  
18 example, the consumer need only provide ordering information once, to the primary  
19 entity, instead of many times to the various vendors. The consumer shops the vendor  
20 website(s) (although the consumer accesses the vendor website through the primary  
21 website), while having a common shopping basket, customer service and order  
22 management system provided by the primary website.

1        The information from the vendor website (which in general is a vendor's on-line  
2 catalog) includes product descriptions, graphical assets and pricing information. All of  
3 the catalog information originates from the vendor's site, not the primary website. Thus,  
4 the vendor's catalog information need not be (and in general is not) stored on the  
5 primary website.

6        A consumer uses a client computer to access the primary website via the  
7 Internet, such as by entering an appropriate URL into a browser program. The primary  
8 website is controlled by the primary entity.

9        The primary website includes an appropriate data exchange to each vendor  
10 website. The consumer has access to the information of the vendor website through  
11 the primary website. The consumer's client computer is always within the primary  
12 website. That is, the client transmits data to and receives data from the primary  
13 website. The client computer may in effect provide data to and receive data from the  
14 vendor website. However, all such data exchanged between the client and the vendor  
15 is filtered by the primary website, as further discussed below.

16        In one embodiment, the primary website filters all information transmitted into  
17 a) commerce transactions (requests), and b) non-commerce information. Commerce  
18 transactions include all information necessary (or helpful) for the customer to complete  
19 a transaction with a vendor. The primary entity performs an appropriate action  
20 responsive to all commerce transactions. The primary entity passes all non-commerce  
21 information to the vendor website, which may take appropriate actions. The non-  
22 commerce information is navigational in nature. For example, actions such as a request  
23 for product detail information would be passed to the partners site. For purposes of

1 elaboration, particular commerce requests (also referred to as service requests) are  
2 described, it being understood that the invention pertains to all commerce requests.  
3 Commerce requests include all transactions related to the consumers "shopping  
4 basket", an understood term of art that refers to items selected for purchase by a  
5 consumer. Commerce requests include customer service inquiries, secured credit card  
6 transactions, order status information, and a single checkout process.

7 A typical commerce request would be to add an item to the consumer's shopping  
8 basket. This is commonly done by browsing an on-line catalog and clicking an  
9 appropriate icon to add the item to the shopping basket. A related request would be  
10 remove an item from a shopping basket, which again is generally performed by clicking  
11 a labeled icon. After a consumer has added a desired number of products to his/her  
12 shopping basket, the user can "checkout", which generally includes having the  
13 consumer supply billing and shipping information. Again, ecommerce and the use of  
14 shopping baskets is well understood and the descriptions herein are for purposes of  
15 illustration only.

16 Other commerce transaction include customer service inquires and status  
17 inquiries. For example, a consumer may query whether a particular order has been  
18 shipped or billed to the consumer.

19 As described, the primary website takes the appropriate action for each  
20 commerce request. For example, if the client requests a commerce transaction of  
21 adding or removing an item from the shopping basket, the primary website updates the  
22 shopping basket to reflect such a request.

1           In order to process many commerce requests, the primary website preferably  
2    interacts with the vendor website through EDI (Electronic Data Interchange) requests.  
3    In a particular and preferred embodiment of the invention, the EDI information is ISO  
4    (International Standards Organization) compliant. EDI information, and in particular ISO  
5    EDI information, is well understood and the ISO EDI standards currently existing are  
6    incorporated by reference in their entirety. For example, if and when the client checks  
7    out, the primary website takes the appropriate steps to order the selected products from  
8    the vendor(s) using EDI exchanges.

9           Non-commerce requests include all requests that do not involve ordering a  
10   product or an inquiry related to the order of a product. As an example, a consumer may  
11   be browsing an on-line catalog of a vendor, made available through the primary  
12   website. Such an on-line catalog will typically have information about products offered  
13   for sale. The consumer can typically obtain more information about a specific product  
14   by clicking (selecting) an icon displaying the product. For example, the vendor may be  
15   an on-line book store, and selecting a certain book may provide access to reviews of  
16   the book. A consumer can select the certain book and obtain access to the review. In  
17   this example, it is important to note that the client is always within the primary website,  
18   and not the vendor's website. The primary website processes the client request for the  
19   book review, determines that it is not a commerce request, and passes the request to  
20   the vendor website. The primary website then transmits the response to the request  
21   (i.e., the website content that is the book review) to the client.

22           It can be appreciated that the invention dynamically shares information between  
23   the vendor website and the client. That is, a non-commerce request from the client is

1        passed through from the client to the vendor website in real time, and the response from  
2        the vendor is passed through in real time. By "real time", it is simply meant that the  
3        information is transmitted by normal Internet transmission means, so that a consumer  
4        can retrieve information substantially as quickly through the primary website as the  
5        consumer could from the vendor website directly, except perhaps for a small delay  
6        since there is another transmission step. More generally, information is dynamically  
7        shared between each of the vendor website, primary website, and client.

8           It is an advantage of the invention that both the consumer and the vendors only  
9        deal with the primary entity. This is advantageous to the consumer because he or she  
10       only has to supply credit card information (or other purchasing related financial  
11       information), ordering information, and the like to one entity (the primary entity), yet has  
12       access to numerous vendors. This is advantageous to the vendors because they only  
13       have to transact with one entity (the primary entity), yet can sell product to numerous  
14       individual consumers. This is also advantageous because the consumer may prefer to  
15       transact with the primary entity instead of with the vendor, such as because of a special  
16       relationship.

17           A description of a process according to an embodiment of the invention is now  
18        provided in connection with FIG. 2. In step 10, the proxy filter logic is enabled. As a  
19        part of this step, an Internet communication link (standard web connection) is  
20        established between the primary site and the vendor site. The returned content is  
21        filtered as described above, formatted (optional step) and displayed to the client. The  
22        "format" step includes adding or modifying the content obtained from the vendor site,  
23        such as adding trade branding elements to the page or reformatting the page if the

1 originating display format conflicts with a display format of the primary site. Thus, the  
2 content of the vendor site can be modified as desired when it is passed to the client.

3 In step 20, the vendor website is displayed on the client computer. As discussed  
4 above, the web page is delivered to the client. In a preferred embodiment, the web  
5 page delivered to the client will have additional content such as navigation icons specific  
6 to the primary site (such as a main co-branded header offering service related items  
7 such as for example basket icon, help, email and customer service). Stated another  
8 way, the vendor's site is merged on the fly with content supplied by the primary website.  
9 That is, as described above, the consumer views the contents (or a selected portion) of  
10 the vendor website, although the client is communicating directly with the primary  
11 website and only indirectly with the client website. From the consumer's perspective,  
12 the vendor website is mirrored on the primary website. Of course, the vendor website is  
13 not simply mirrored, because commerce transactions are filtered.

14 In decision step 30, the primary website determines whether the consumer  
15 requests a commerce transaction. In order to perform this step, the vendor site is  
16 technically mapped related to all commerce related actions. This is achieved by  
17 examining the vendor's HTML (or equivalent) source, identifying all internal commerce  
18 functions and mapping the actions to the primary website's commerce processes. The  
19 vendor website can be viewed, such as by the view source option within any browser.

20 The relationship with the vendor is generally not arbitrary in nature. The primary  
21 website and the vendor website(s) will in general negotiate profit margins on sales, EDI  
22 exchange procedures defined, accepted shipping methods, file transfer specifications  
23 (FTP or modem) and process frequencies (when\where to get and put order files).

1        Returning to FIG. 2, step 30, if a process step is detected the primary website  
2    processes the commerce request at step 40. If not, the consumer continues shopping  
3    at step 50. The continue shopping step can include taking any non-commerce action,  
4    such as browsing a vendor's website or moving from one vendor's website to another.

5        A continue shopping request following a commerce action will put the consumer  
6    in a "home" position, meaning back to a main page at the primary website. In a  
7    preferred embodiment, this should apply to all scenarios, although the consumer can  
8    use the back button on the browser to go back to a previous page. The continue  
9    shopping step 50 is followed by the display step 20, as a vendor website is again  
10   displayed to the consumer, depending upon the selection of the consumer.

11       It should be apparent that the steps of FIG. 2 are equally applicable if there is  
12   one vendor, or if there is more than one vendor.

13

14

## 1           WHAT IS CLAIMED IS:

2           1.    A system for computer network vending between a consumer and a  
3            vendor, comprising:

4                a client computer controlled by the consumer;  
5                a primary website in communication with the client computer;  
6                a vendor website having content in communication with the primary  
7            website;  
8                the client computer for browsing the content of the vendor website while  
9            the client computer is communicating with the primary website and for making a  
10           commerce request in response to the content of the vendor website;  
11               the primary website responding to the transaction request.

12           2.    The system of claim 1, wherein the client computer does not communicate  
13           directly with the vendor website.

14           3.    The system of claim 2, wherein the commerce request includes a request  
15           selected from the group consisting of a service inquiry, a financial transaction, a request  
16           for order status information, and a request related to a customer shopping basket.

17           4.    The system of claim 3, wherein the client computer makes a non-  
18           commerce request in response to the content of the vendor website; the primary  
19           website passes the non-commerce request to the vendor website; and the vendor  
20           website responds to the non-commerce request.

21           5.    The system of claim 4, wherein the primary website adds content to the  
22           content of the vendor website.

1           6.     The system of claim 5, wherein the primary website transmits EDI  
2 information to the vendor website in response to a client computer commerce request.

3           7.     A method of transmitting information content between a vending website  
4 and a client computer, comprising the steps of:

5           a) establishing communication between the vending website and a primary  
6 website;

7           b) transmitting vending website content from the primary website to the client;

8           c) receiving a commerce request from the client to the primary website in  
9 response to the transmitting step b;

10          d) acting upon the received commerce request by the primary website.

11          8.     The method of claim 7, further comprising the step of mapping the vendor  
12 website into commerce related processes and non-commerce related processes.

13          9.     The method of claim 8, wherein the client responds to commerce related  
14 processes and non-commerce related processes, and further comprising the steps of  
15 taking an appropriate action by the primary website as to commerce related processes,  
16 and passing non-commerce related processes from the primary website to the vendor  
17 website.

18          10.    The method of claim 7, wherein step b further includes the step of adding  
19 content from the primary website.

20          11.    A method of computer network vending, comprising the steps of:

21           passing website content from a vendor website to a primary website;

22           mapping the vendor website into commerce related processes and non-  
23 commerce related processes to form a modified vendor website content;

1                   transmitting the modified vendor website content to a client;  
2                   receiving commerce requests and non-commerce requests by the primary  
3                   website, wherein the primary website takes an action based on the commerce requests  
4                   and the primary website transmits the commerce requests to the vendor website.

5                   12. A system for computer network vending between a consumer and a  
6                   plurality of vendors comprising:

7                   a client computer controlled by the consumer;  
8                   a primary website controlled by a primary entity, the client computer being  
9                   in communication with the primary website;

10                  a plurality of vendors each having a vendor website, each vendor website  
11                  being in communication with the primary website;

12                  the client computer making a commerce request with at least one of the  
13                  plurality of vendors by transmitting the commerce request to the primary website  
14                  and the primary website communicating the commerce request to the at least  
15                  one the plurality of vendors, wherein the transaction is completed without the  
16                  client computer directly communicating with the at least one of the plurality of  
17                  vendors.

18                  13. The system of claim 12, wherein the consumer completes the transaction  
19                  request such that the client computer is always within the primary website.

20                  14. The system of claim 13, wherein the client computer makes a transaction  
21                  request with another of the plurality of vendors by transmitting a request to the  
22                  primary website and the primary website communicates the request to the  
23                  another of the plurality of vendors, wherein the transaction is completed without

1                   the client computer directly communicating with the another of the plurality of  
2                   vendors.

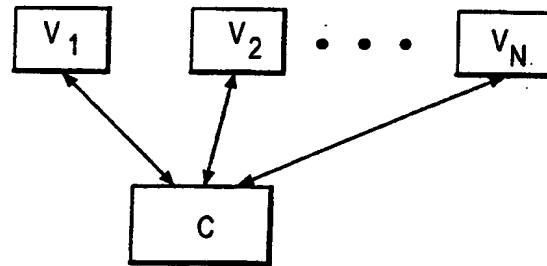
3                   15.    A method of allowing a consumer to complete a number of transactions  
4                   with a number of different vendors, comprising the steps of:

5                   dynamically making transaction requests from a client computer controlled  
6                   by a computer to a primary website, the transaction requests including requests  
7                   intended for a plurality of vendors;

8                   processing the transaction requests by the primary website, including  
9                   transmitting data from the primary website to the vendors related to the  
10                   transaction requests; wherein the client computer communicates with the primary  
11                   website via at least a shopping basket, and the shopping basket includes an  
12                   amount of data related to the transaction requests.

13

1/1



PRIOR ART

FIG.1

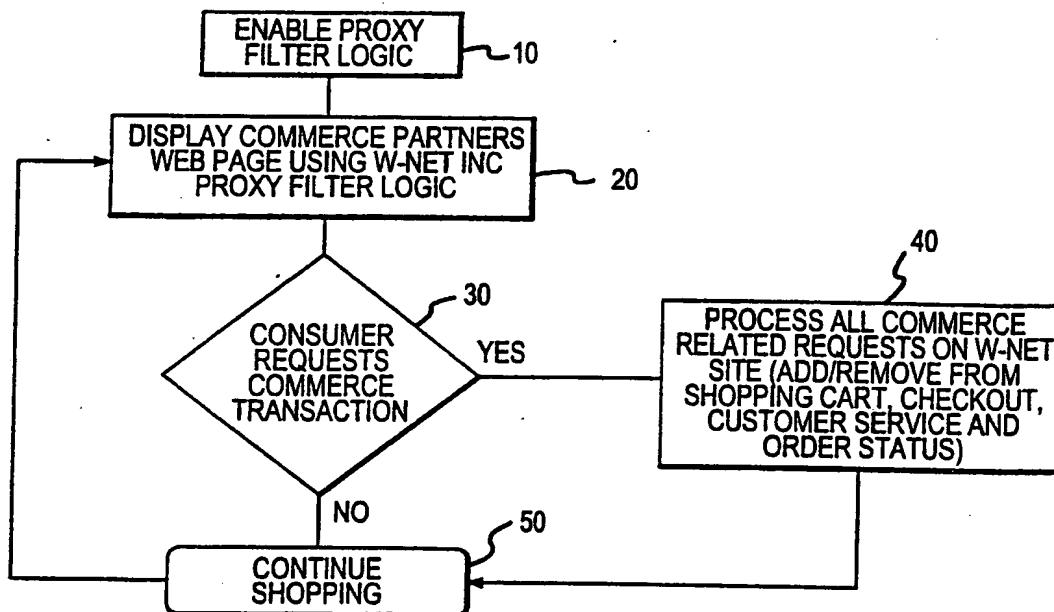


FIG.2